

What is claimed is:

1. A method in a data processing system having a client and a server, the method for remote processing at the client, the client having a first component of a service application, the server having a second component of the service application, the method comprising the steps of:

receiving from the server a request to execute the first component;
initiating execution of the first component based on the received request;
after initiating execution of the first component, instructing the server to initiate execution of the second component;
receiving a completion indicator from the server indicating that the second component has terminated execution; and
terminating execution of the first component module responsive to receipt of the completion indicator.

2. The method of claim 1, further comprising the steps of:
receiving a user command to execute the service application; and
requesting the server to send the request to execute the first component.

3. The method of claim 1, wherein the server request includes an identifier of the second component of the service application.

4. The method of claim 1, further comprising the steps of:
determining whether the first component and the second component are available for execution.

5. The method of claim 1, wherein:
the request to execute the first component is included in a web page with a URL identifying the second component,
the server is instructed to initiate execution of the second component by returning the URL to the server, and
the received completion indicator from the server is included in a response to the returned URL from the client.

6. The method of claim 1, wherein the server is a web server.

7. The method of claim 1, wherein the first component comprises one of a plug-in and an applet, which is executed by loading a web page in a browser application executed at the client; and wherein the second component comprises a servlet scripted at the server.

8. The method of claim 1, wherein the service application comprises at least one application selected from the group consisting of a print operation, a visualization operation, a storing operation a rendering operation, a mathematical operation, and a logical operation.

9. A method in a data processing system having a client and a server, the method for remote processing at the client, the client having a first component of a service application, a web server having a second component of the service application, the method comprising the steps of:

receiving from the server a web page with a request to execute the first component, the web page including a URL identifying the second component;

initiating execution of the first component based on the received request;

after initiating execution of the first component, instructing the server to initiate execution of the second component by returning the URL to the server;

receiving a completion indicator from the server indicating that the second component has terminated execution; and

terminating execution of the first component responsive to receipt of the completion indicator.

10. A method in a data processing system having a client and a server, the method for remote processing at the server, the client having a first component of a service application, a server having a second component of the service application, the method comprising the steps of:

requesting the client to initiate execution of the first component and to return a client request to the server to initiate execution of the second component;

receiving the request to initiate execution of the second component;

initiating execution of the second component based on the received client request;

determining when the second component has terminated execution; and

when it is determined that the second component has terminated execution,
5 sending an indication to the client that the second component has terminated execution to notify the client to terminate execution of the first component.

11. The method of claim 10, further comprising the step of:

receiving a further client request instructing the server to request the client to
10 initiate execution of the first component.

12. The method of claim 10, wherein the request to the client to initiate execution of the first component includes an identifier of the second component.

13. The method of claim 10, further comprising the step of:

determining whether the first component and the second component are
available for execution.

14. The method of claim 10, wherein:

the request to initiate execution of the first component is included in a web
page with a URL identifying the second component;

receiving the URL with the client request instructing the server to initiate
execution of the second component; and

the client is notified with the completion indicator in a response to the client
25 request having the URL.

15. The method of claim 10, wherein the server is a web server.

16. The method of claim 10, wherein the first component comprises one of
30 a plug-in and an applet, which is executed by loading a web page in a browser application executed at the client; and wherein the second component comprises a servlet scripted at the server.

17. The method of claim 10, wherein the service application comprises at least one application selected from the group consisting of a print operation, a visualization operation, a storing operation a rendering operation, a mathematical operation, and a logical operation.

18. A method in a data processing system having a client and a server, the method for remote processing at the server, the client having a first component of a service application, the server having a second component of the service application, the method comprising the steps of:

requesting the client to initiate execution of the first component and to return a client request to the server to initiate execution of the second component, the request to initiate execution of the first component contained in a web page having a URL identifying the second component;

receiving the client request to initiate execution of the second component, the client request including the URL;

initiating execution of the second component based on the received client request;

determining when the second component has terminated execution; and

when it is determined that the second component has terminated execution, sending an indication to the client that the second component has terminated execution to notify the client to terminate execution of the first component.

19. A computer-readable medium containing instructions that cause a data processing system having a client and a server to perform a method for remote processing at the client, the client having a first component of a service application, the server having a second component of the service application, the method comprising the steps of:

receiving from the server a request to execute the first component;

initiating execution of the first component based on the received request;

after initiating execution of the first component, instructing the server to initiate execution of the second component;

receiving a completion indicator from the server indicating that the second component has terminated execution; and

terminating execution of the first component responsive to receipt of the completion indicator.

20. The computer-readable medium of claim 19, further comprising the steps of:

receiving a user command to execute the service application; and
requesting the server to send the request to execute the first component.

21. The computer-readable medium of claim 19, wherein the request to execute the first component includes an identifier of the second component of the service application.

22. The computer-readable medium of claim 19, further comprising the steps of:

determining whether the first component and the second component are available for execution.

23. The computer-readable medium of claim 19, wherein:
the request to execute the first component is included in a web page with a URL identifying the second component,

the server is instructed to initiate execution of the second component by returning the URL to the server, and

the received completion indicator from the server is included in a response to the returned URL from the client.

24. The computer-readable medium of claim 19, wherein the server is a web server.

25. The computer-readable medium of claim 19, wherein the first component comprises one of a plug-in and an applet, which is executed by loading a web page in a browser application executed at the client; and wherein the second component comprises a servlet scripted at the server.

26. The computer-readable medium of claim 19, wherein the service application comprises at least one application selected from the group consisting of a print operation, a visualization operation, a storing operation a rendering operation, a mathematical operation, and a logical operation.

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27. A computer-readable medium containing instructions that cause a data processing system having a client and a server to perform a method for remote processing at the client, the client having a first component of a service application, the server having a second component of the service application, the method comprising the steps of:

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receiving from the server a web page with a request to execute the first component, the web page including a URL identifying the second component;

initiating execution of the first component based on the received request;

after initiating execution of the first component, instructing the server to initiate execution of the second component by returning the URL to the server;

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receiving a completion indicator from the server indicating that the second component has terminated execution; and

terminating execution of the first module responsive to receipt of the completion indicator.

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28. A computer-readable medium containing instructions that cause a data processing system having a client and a server to perform a method for remote processing at the server, the client having a first component of a service application, the server having a second component of the service application, the method comprising the steps of:

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requesting the client to initiate execution of the first component and to return a client request to the server to initiate execution of the second component;

receiving the client request to initiate execution of the second component;

initiating execution of the second component based on the received client request;

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determining when the second component has terminated execution; and

when it is determined that the second component has terminated execution, sending an indication to the client that the second component has terminated execution to notify the client to terminate execution of the first component.

29. The computer-readable medium of claim 28, further comprising the step of:

5 receiving a second client request instructing the server to request the client to initiate execution of the first component.

30. The computer-readable medium of claim 28, wherein the request to the client to initiate execution of the first component includes an identifier of the second component.

10 31. The computer-readable medium of claim 28, further comprising the step of:

determining whether the first component and the second component are available for execution.

15 32. The computer-readable medium of claim 28, wherein:
the request to execute the first component is included in a web page with a URL identifying the second component;

20 receiving the URL with the client request instructing the server to initiate execution of the second component; and

the client is notified with the completion indicator in a response to the client request having the URL.

25 33. The computer-readable medium of claim 28, wherein the server is a web server.

30 34. The computer-readable medium of claim 28, wherein the first component comprises one of a plug-in and an applet, which is executed by loading a web page in a browser application executed at the client; and wherein the second component comprises a servlet scripted at the server.

35. The computer-readable medium of claim 28, wherein the service application comprises at least one application selected from the group consisting of a

print operation, a visualization operation, a storing operation a rendering operation, a mathematical operation, and a logical operation.

36. A computer-readable medium containing instructions that cause a data processing system having a client and a server to perform a method for remote processing at the server, the client having a first component of a service application, the server having a second component of the service application, the method comprising the steps of:

requesting the client to initiate execution of the first component and to return a client request to the server to initiate execution of the second component, the request to initiate execution of the first component contained in a web page having a URL identifying the second module;

receiving the client request to initiate execution of the second component, the client request including the URL;

initiating execution of the second component based on the received client request;

determining when the second component has terminated execution; and

when it is determined that the second component has terminated execution, sending an indication to the client that the second component has terminated execution to notify the client to terminate execution of the first component.

37. A client data processing system comprising:

a memory comprising a service application with a first component and a second component, and a computer program that receives from a server a request to execute the first component, initiates execution of the first component based on the received request, instructs the server to initiate execution of the second component of the service application program located at the server after initiating execution of the first component, receives a completion indicator from the server indicating that the second component has terminated execution, and terminates execution of the first component responsive to receipt of the completion indicator; and

a processing unit that runs the computer program.

38. The data processing system of claim 37, wherein:

the request to initiate execution of the first component is included in a web page with a URL identifying the second component,

the server is instructed to initiate execution of the second component by returning the URL to the server, and

5 the received completion indicator from the server is included in a response to the returned URL from the client.

39. The data processing system of claim 37, wherein the server is a web server.

10 40. A client data processing system comprising:

a memory comprising a service application with a first component and a second component, and a computer program that receives from a server a web page with a request to execute the first component, the web page including a URL identifying the second module of the service application program located at the server, initiates execution of the first component based on the received request, after initiating execution of the first component, instructs the server to initiate execution of the second component by returning the URL to the server, receives a completion indicator from the server indicating that the second component has terminated execution, and terminates execution of the first component upon receipt of the completion indicator; and

20 a processing unit that runs the computer program.

41. A server data processing system comprising:

25 a memory comprising a service application having a first component and a second component, and a computer program that requests a client to initiate execution of the first component of the service application program located at the client and to return a client request to initiate execution of the second component, receives the client request to initiate execution of the second component, initiates execution of the second component based on the received client request, determines when the second component has terminated execution, and when it is determined that the second component has terminated execution, sends an indication to the client that the second component has terminated execution to notify the client to terminate execution of the first component; and

a processing unit that runs the computer program.

42. The data processing system of claim 41, wherein:

5 the request to initiate execution of the first component is included in a web page with a URL identifying the second component;

receiving the URL with the client request instructing the server to initiate execution of the second component; and

the client is notified with the completion indicator in a response to the client request having the URL.

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43. The data processing system of claim 41, wherein the server is a web server.

44. A server data processing system comprising:

5 a memory comprising a service application having a first component and a second component, and a computer program that requests a client to initiate execution of a first component of the service application program located at the client and to return a client request to initiate execution of the second component, the request contained in a web page having a URL identifying the second component; receives the client request to initiate execution of the second module, the client request including the URL; initiates execution of the second module based on the received client request, determines when the second component has terminated execution, and when it is determined that the second component has terminated execution, sends an indication to the client that the second component has
20 terminated execution to notify the client to terminate execution of the first component; and

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a processing unit that runs the computer program.

45. A data processing system having a client and a server, the data
30 processing system for remote processing at the client, the client having a first component of a service application, the server having a second component of the service application, the data processing system comprising:

means for receiving from the server a request to execute the first component;

means for initiating execution of the first component based on the received request;

means for, after initiating execution of the first component, instructing the server to initiate execution of the second component;

5 means for receiving a completion indicator from the server indicating that the second component has terminated execution; and

means for terminating execution of the first component responsive to receipt of the completion indicator.

10 46. A data processing system having a client and a server, the data processing system for remote processing at the client, the client having a first component of a service application, the server having a second component of the service application, the data processing system comprising:

5 means for receiving from the server a web page with a request to execute the first component, the web page including a URL identifying the second component;

means for initiating execution of the first component based on the received request;

20 means for, after initiating execution of the first component, instructing the server to initiate execution of the second component by returning the URL to the server;

means for receiving a completion indicator from the server indicating that the second component has terminated execution; and

means for terminating execution of the first component responsive to receipt of the completion indicator.

25 47. A data processing system having a client and a server, the data processing system for remote processing at the server, the client having a first component of a service application, the server having a second component of the service application, the data processing system comprising:

30 means for requesting the client to initiate execution of the first component and to return a client request to the server to initiate execution of the second component;

means for receiving the client request to initiate execution of the second component;

means for initiating execution of the second component based on the received client request;

means for determining when the second component has terminated execution; and

5 means for, when it is determined that the second component has terminated execution, sending an indication to the client that the second component has terminated execution to notify the client to terminate execution of the first component.

10 48. A data processing system having a client and a server, the data processing system for remote processing at the server, the client having a first component of a service application, the server having a second component of the service application, the data processing system comprising:

5 means for requesting the client to initiate execution of the first component and to return a client request to the server to initiate execution of the second component, the request contained in a web page having a URL identifying the second component;

means for receiving the client request to initiate execution of the second component, the client request including the URL;

20 means for initiating execution of the second component based on the received client request; and

means for determining when the second component has terminated execution; and

25 means for, when it is determined that the second component has terminated execution, sending an indication to the client that the second component has terminated execution to notify the client to terminate execution of the first component.